



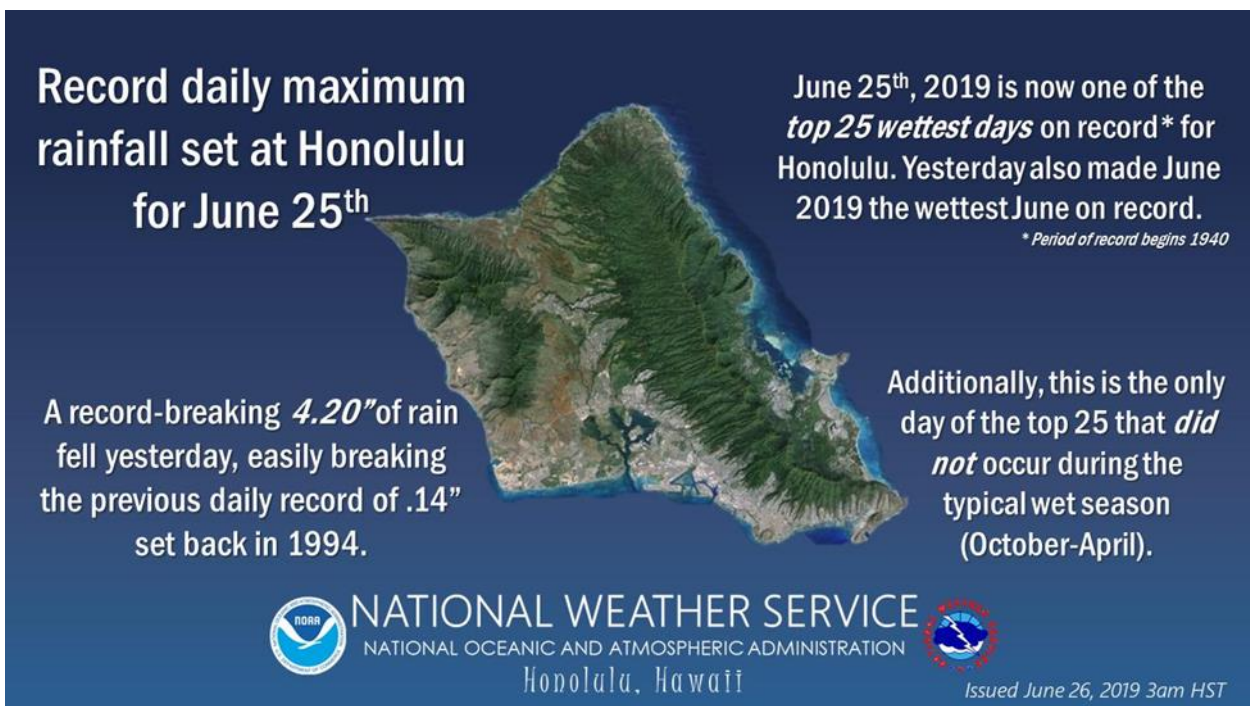
Water and Climate Update

July 3, 2019

The Natural Resources Conservation Service produces this weekly report using data and products from the [National Water and Climate Center](#) and other agencies. The report focuses on seasonal snowpack, precipitation, temperature, and drought conditions in the U.S.

Precipitation	2	Other Climatic and Water Supply Indicators	11
Temperature.....	6	Short- and Long-Range Outlooks.....	15
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Record rainfall and flash flooding in Hawaii



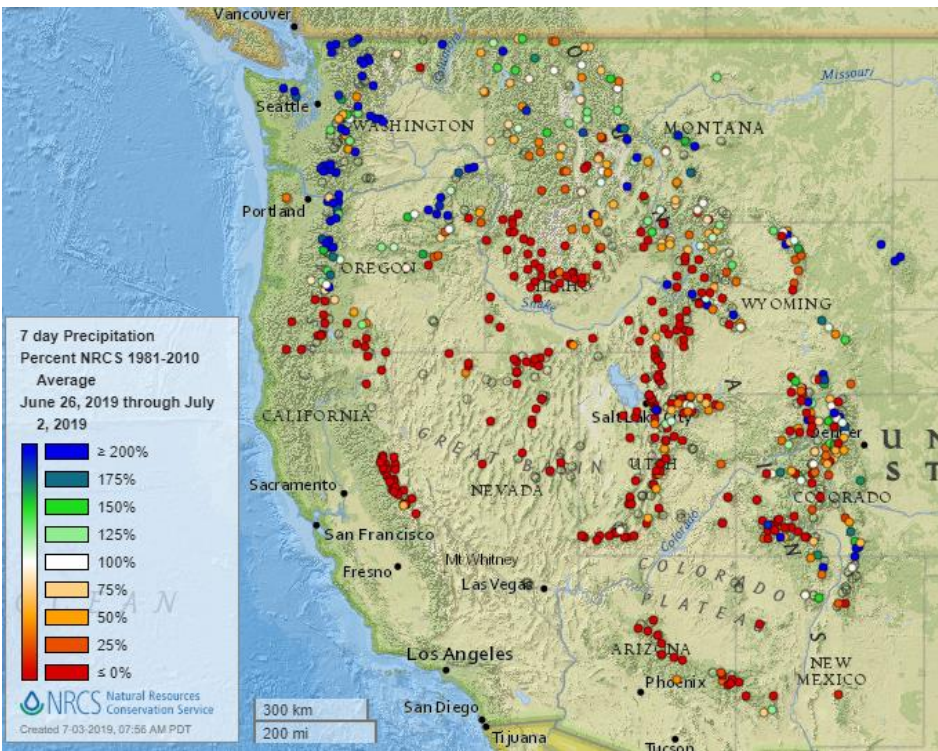
Very heavy rainfall across the northwestern islands of Oahu, Molokai, and Lanai in Hawaii causing daily and monthly rainfall records to fall. The rainfall in Honolulu on June 25th was 4.20 inches, 30 times the old record of 0.14 inches and 16 times the June monthly normal rainfall. This also made June 2019 the wettest June on record. Flash flood warnings were posted for the entire Island of Oahu of nearly 1 million people as the deluge swelled local waterways.

Related:

[Extraordinary, record-crushing rainstorm deluges Honolulu](#) – The Washington Post
[Drenching showers set records — and there's more rain in the forecast](#) – KHNL (HI)
[Experts: Paradoxically, recent heavy rains could mean busier wildfire season](#) – KHNL (HI)
[Record rainfall set in Honolulu Tuesday](#) – KITV (HI)
[City and County of Honolulu respond to record-breaking June rainfall event](#) – KITV (HI)
[Unsettled weather to continue, rainfall sets record for wettest June day in Honolulu](#) – Honolulu Star-Advertiser (HI)

Precipitation

Last 7 Days, NRCS SNOTEL Network

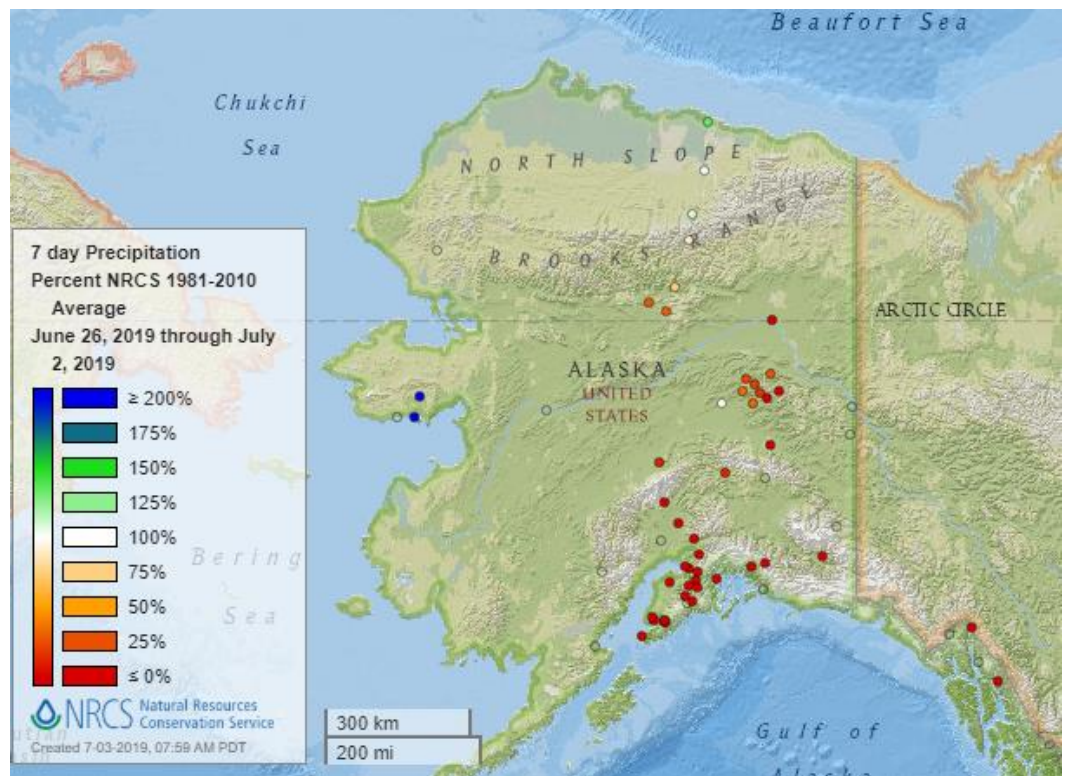


[7-day precipitation percent of average map](#)

See also:
[7-day total precipitation values \(inches\) map](#)

[Alaska 7-day precipitation percent of average map](#)

See also:
[Alaska 7-day total precipitation values \(inches\) map](#)

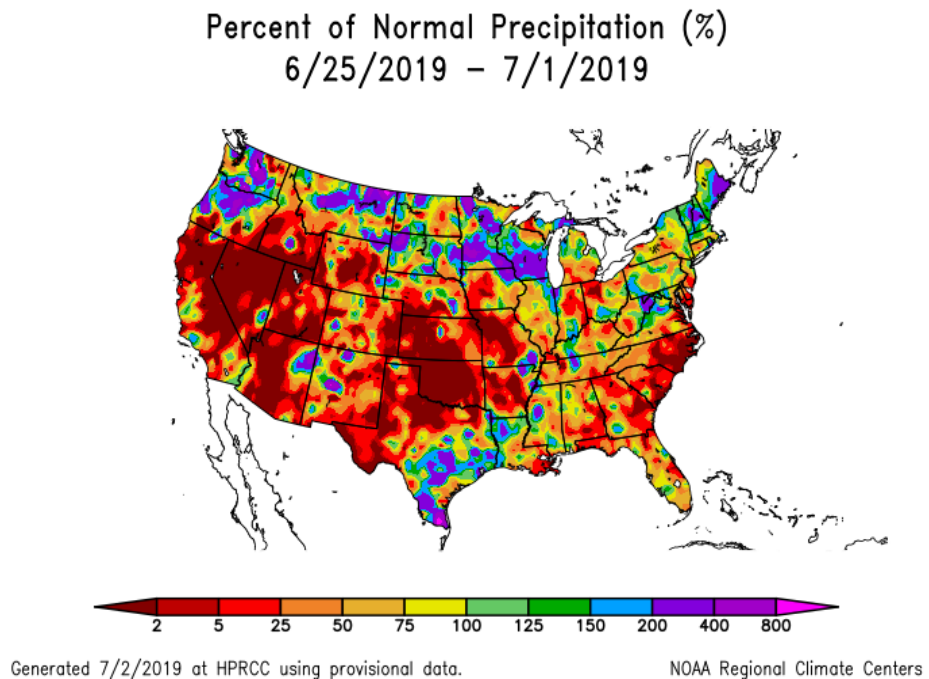


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day precipitation percent of normal map](#) for the continental U.S.

See also: [7-day total precipitation values \(inches\) map](#)

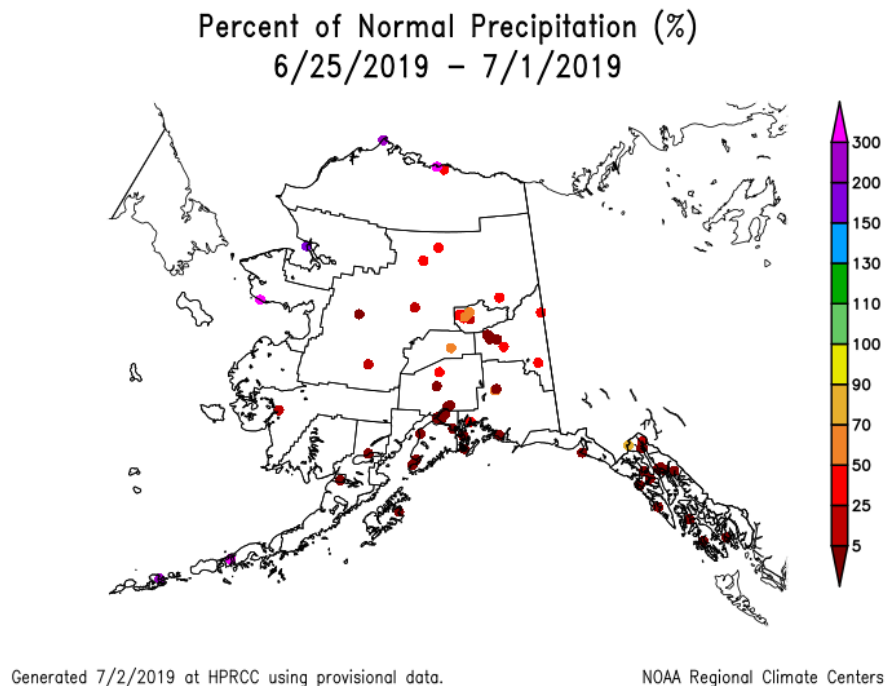


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

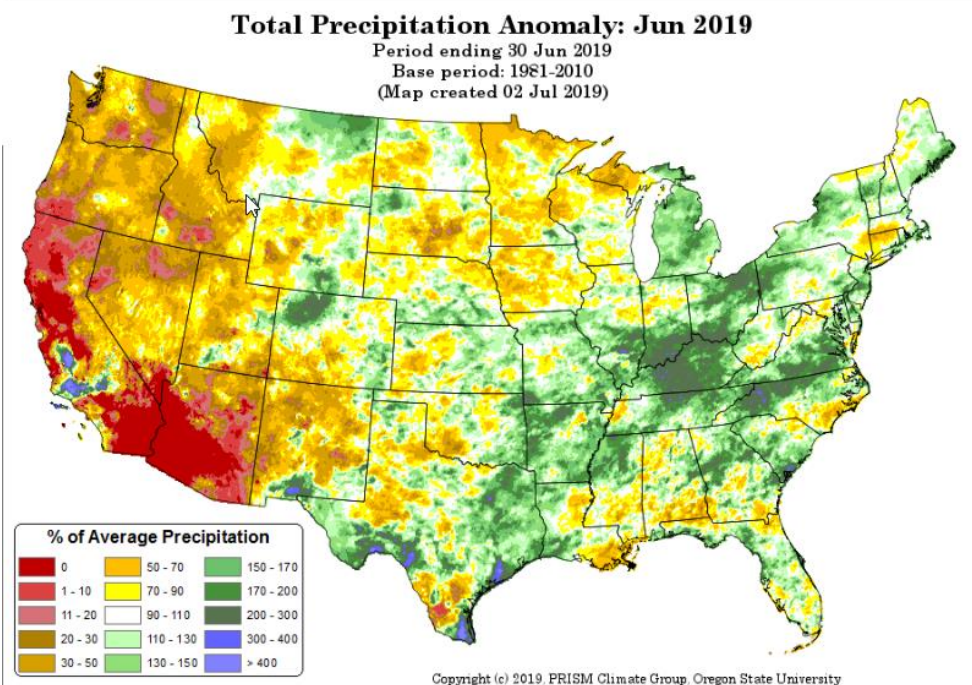
[7-day precipitation anomaly map](#) for Alaska.

See also: [7-day total precipitation values \(inches\) map](#)



Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

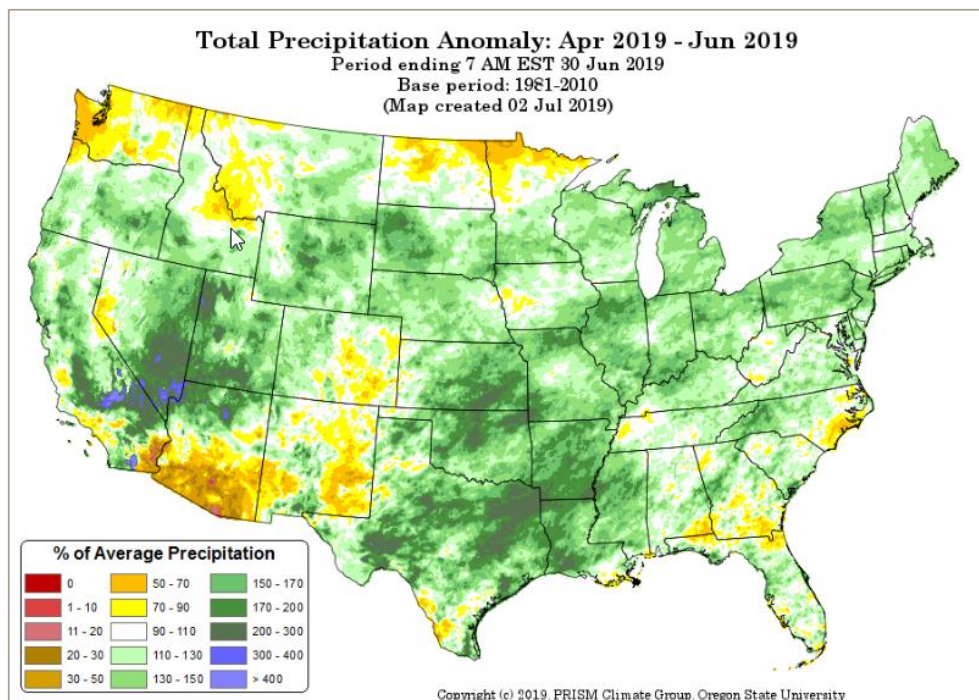


[Previous month national total precipitation percent of average map](#)

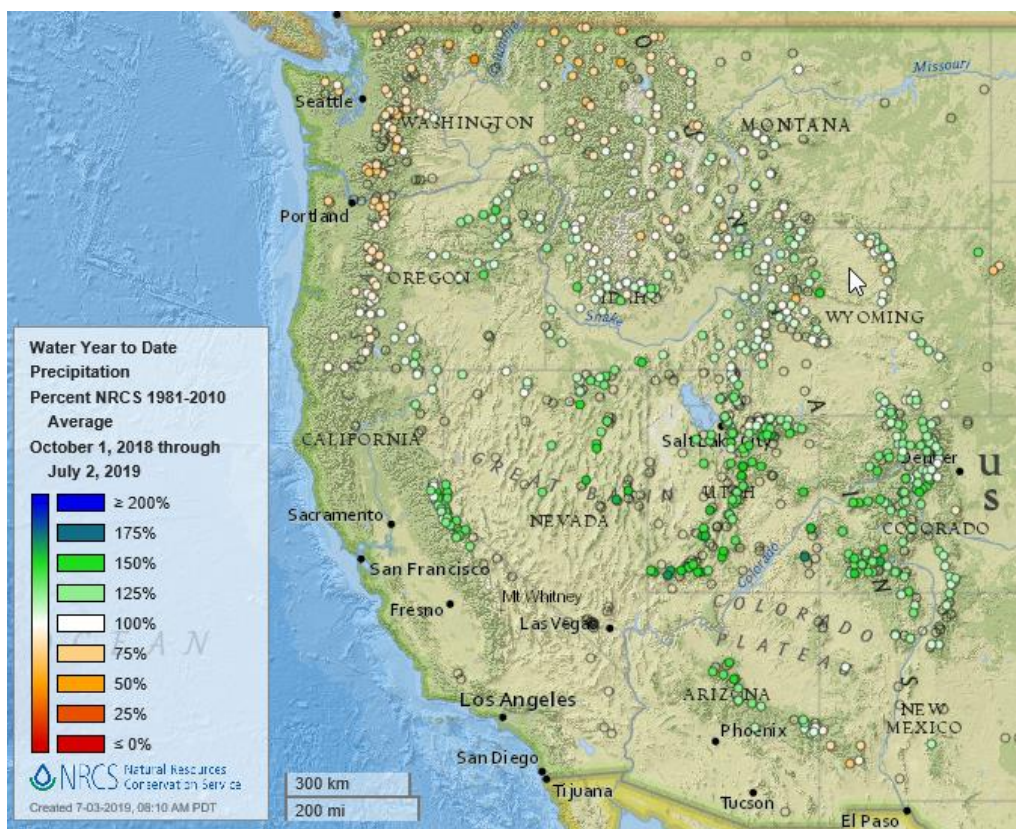
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[April through June 2019 total precipitation percent of average map](#)



Water Year-to-Date, NRCS SNOTEL Network



[2019 water year-to-date precipitation percent of average map](#)

See also:
[2019 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2019 water year-to-date precipitation percent of average map](#)

See also: [Alaska 2019 water year-to-date precipitation values \(inches\) map](#)

Temperature

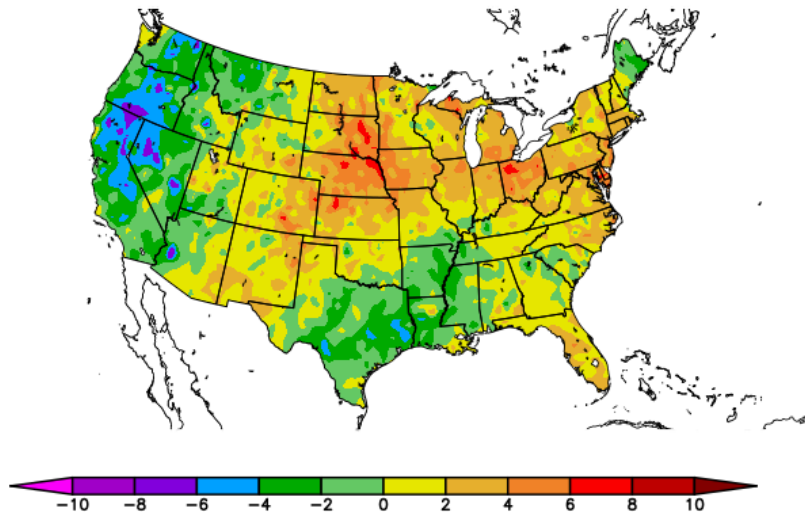
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map](#) for the contiguous U.S.

See also: [7-day temperature \(° F\) map](#)

Departure from Normal Temperature (F)
6/25/2019 – 7/1/2019



Generated 7/2/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

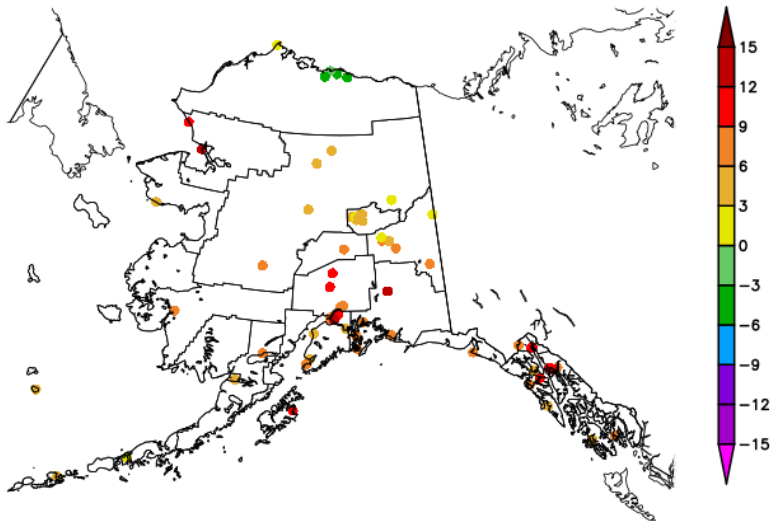
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map](#) for Alaska.

See also: [7-day temperature \(° F\) map](#)

Departure from Normal Temperature (F)
6/25/2019 – 7/1/2019



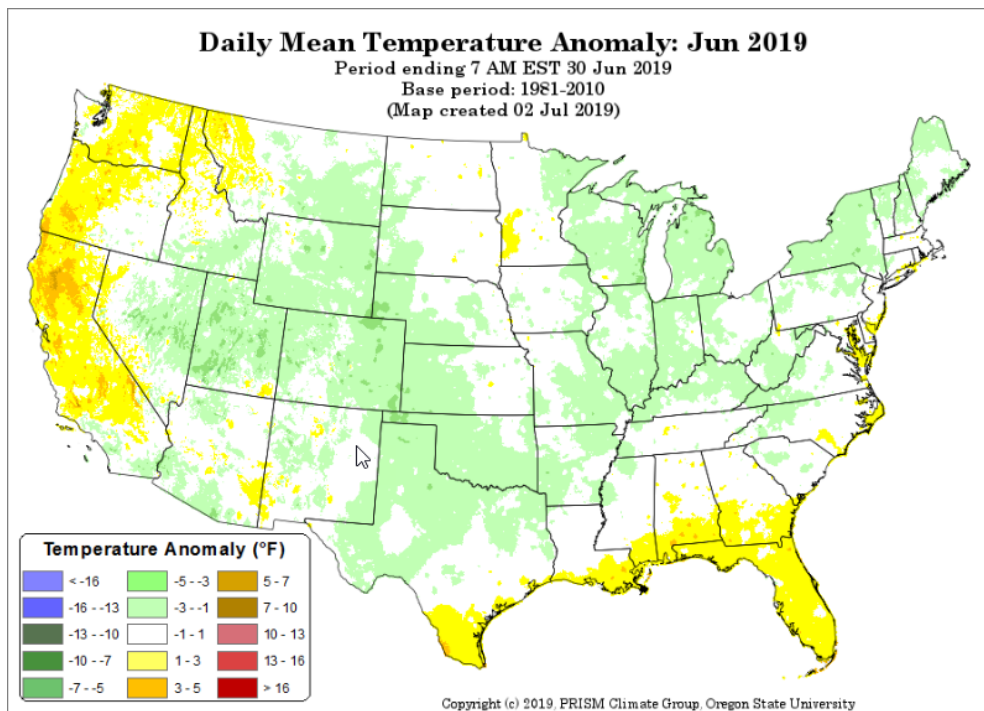
Generated 7/2/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Previous Month, All Available Data Including SNOTEL and NWS Networks

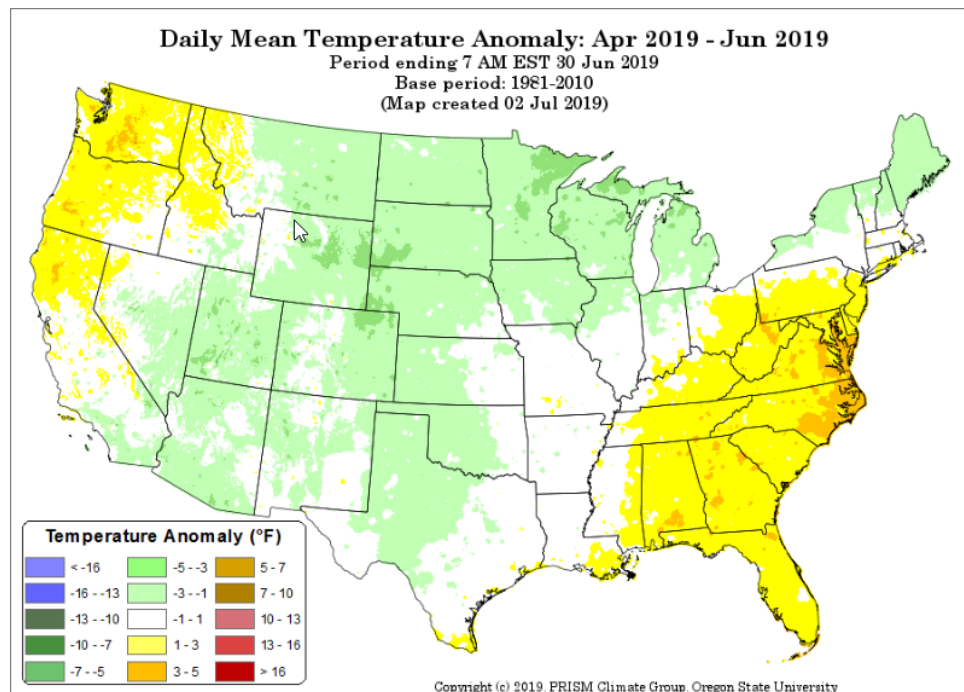
Source: PRISM

[Previous month
national daily
mean
temperature
anomaly map](#)



Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM



[April through June 2019
daily mean temperature
anomaly map](#)

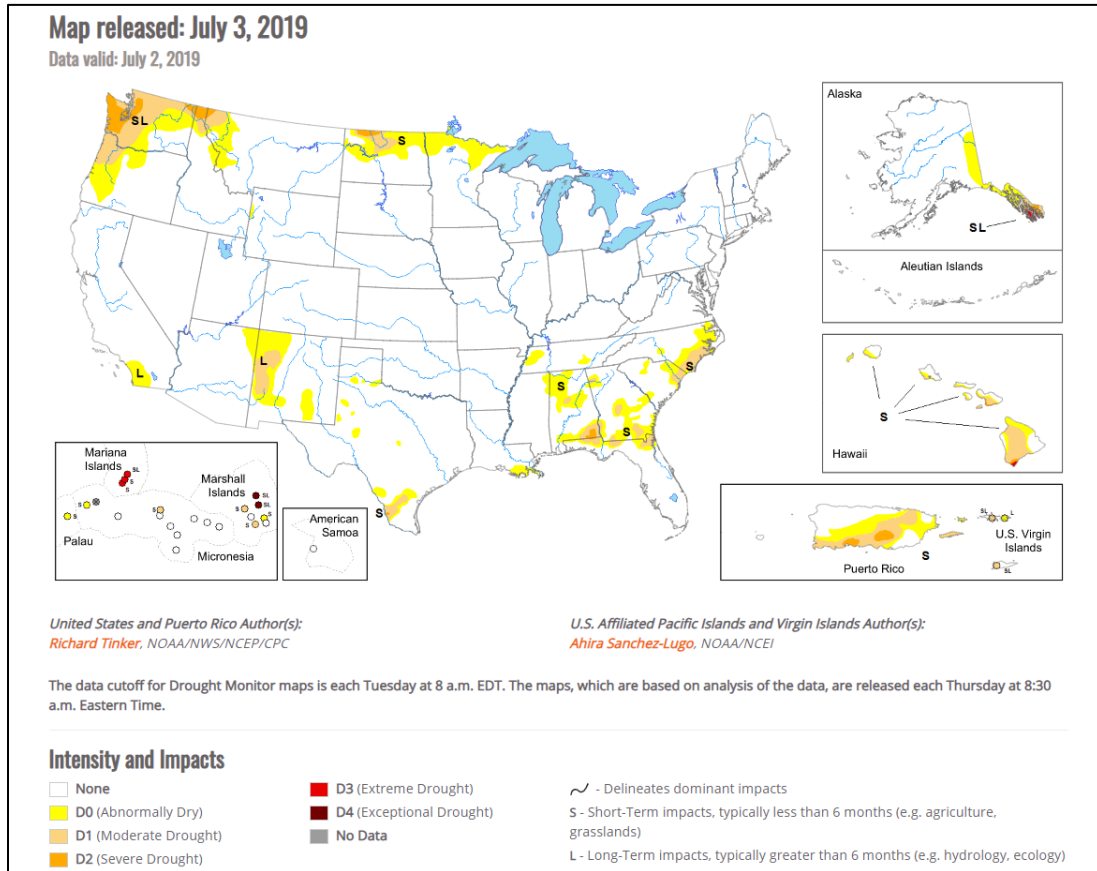
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), July 3, 2019

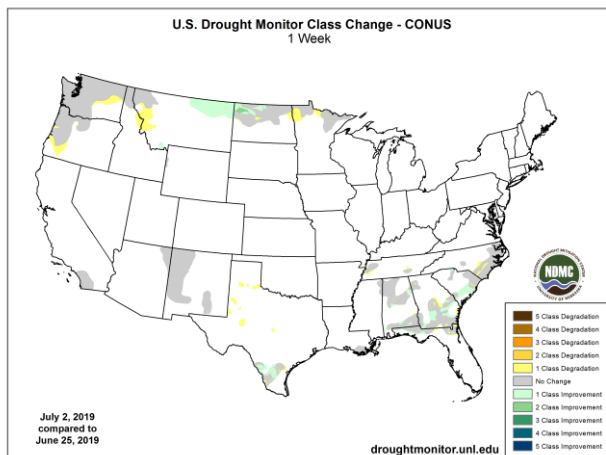
Source: National Drought Mitigation Center

"It was a mixed picture for the dry areas across the country. Widespread rainfall totals exceeding 2 inches fell from northeast Montana to north-central North Dakota, with a swath of 4 to 6 inches soaking part of northwest North Dakota. Farther east, generally under an inch fell on northeastern North Dakota and northern Minnesota near the Canadian border, with amounts increasing to the south. Between 0.5 and 2.0 inches of rain fell on the climatologically-wetter areas of the Pacific Northwest on the west side of the Cascades and along the immediate coast, and 0.5 to 1.0 inch fell on northwestern Montana and part of adjacent Idaho. Other parts of the Northwest recorded less than 0.5 inch, with only a few tenths of an inch falling on most of interior Washington and Oregon. Very little, if any, precipitation fell farther to the south, from central Oregon and Idaho southward through the Far West, and roughly the western half of the Four Corners region. Rainfall was highly variable through south Texas and the Southeast (not uncommon during summer). Several small areas from south Georgia, north Florida, and Alabama westward received over 2 inches of rain, with isolated amounts reaching nearly 6 inches in south Texas. Rainfall was considerably sparser from central and north Georgia through the Carolinas, where most sites recorded only a few tenths of an inch. Outside the contiguous states, light to moderate rains fell on north-central and central Puerto Rico while little or none was observed along the southern tier of the Commonwealth. Historically heavy out-of-season rains soaked parts of the leeward areas across Hawaii, with over 4 inches soaking Honolulu within 24 hours – more than any prior full month of June on record brought."

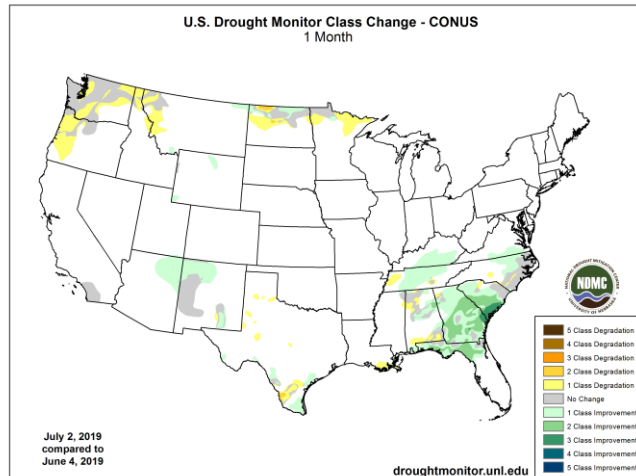
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

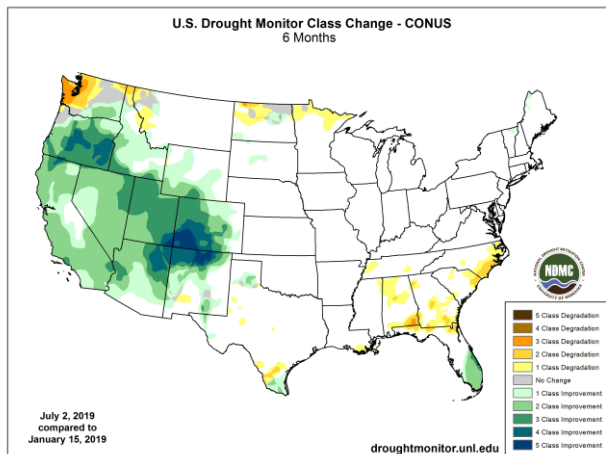
1 Week



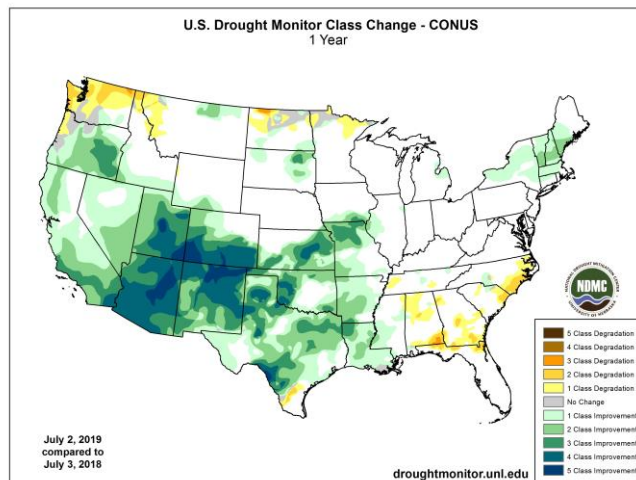
1 Month



6 Months



1 Year



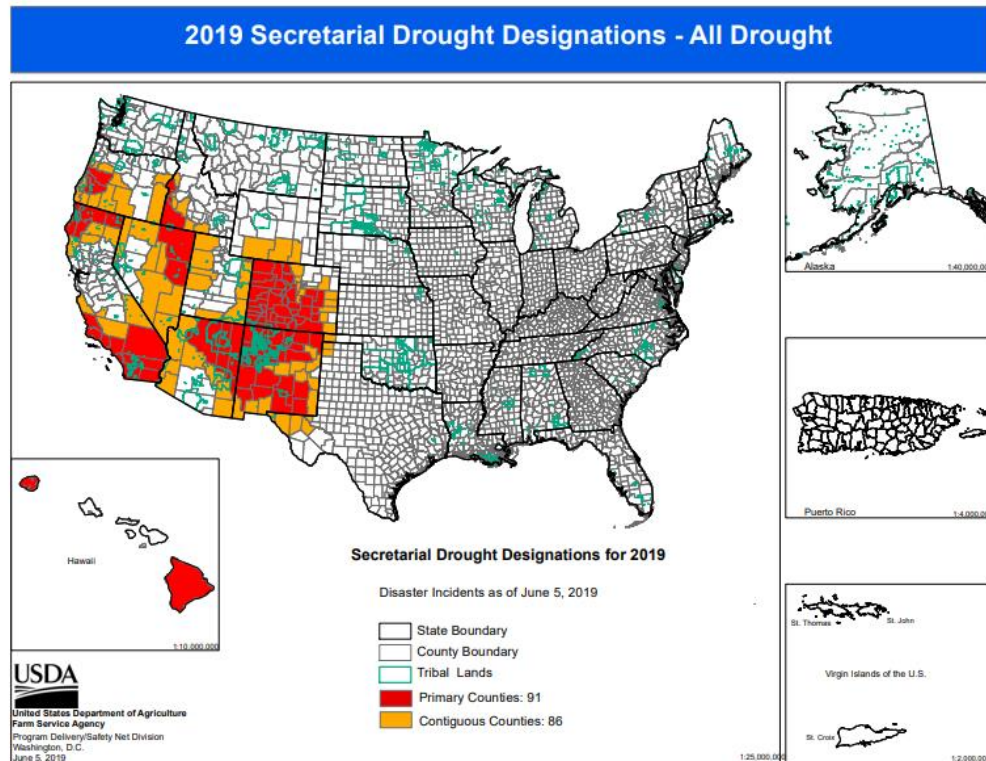
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

Highlighted Drought Resources

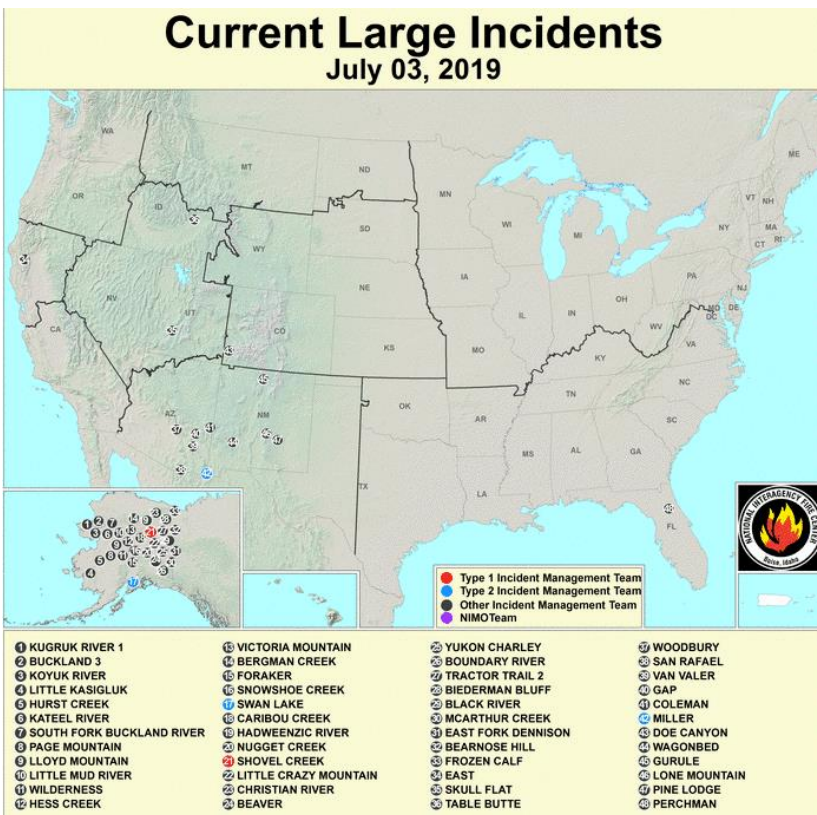
- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

Secretarial [Drought Designations](#)

Source: USDA Farm Service Agency



Wildfires: [USDA Forest Service Active Fire Mapping](#)



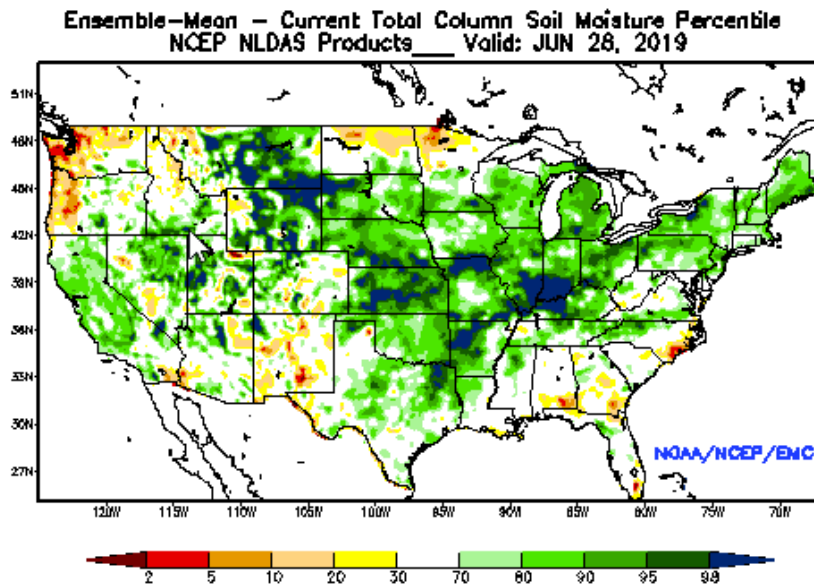
Highlighted Wildfire Resources

- [National Interagency Fire Center](#)
- [InciWeb Incident Information System](#)
- [Significant Wildland Fire Potential Outlook](#)

Other Climatic and Water Supply Indicators

Soil Moisture

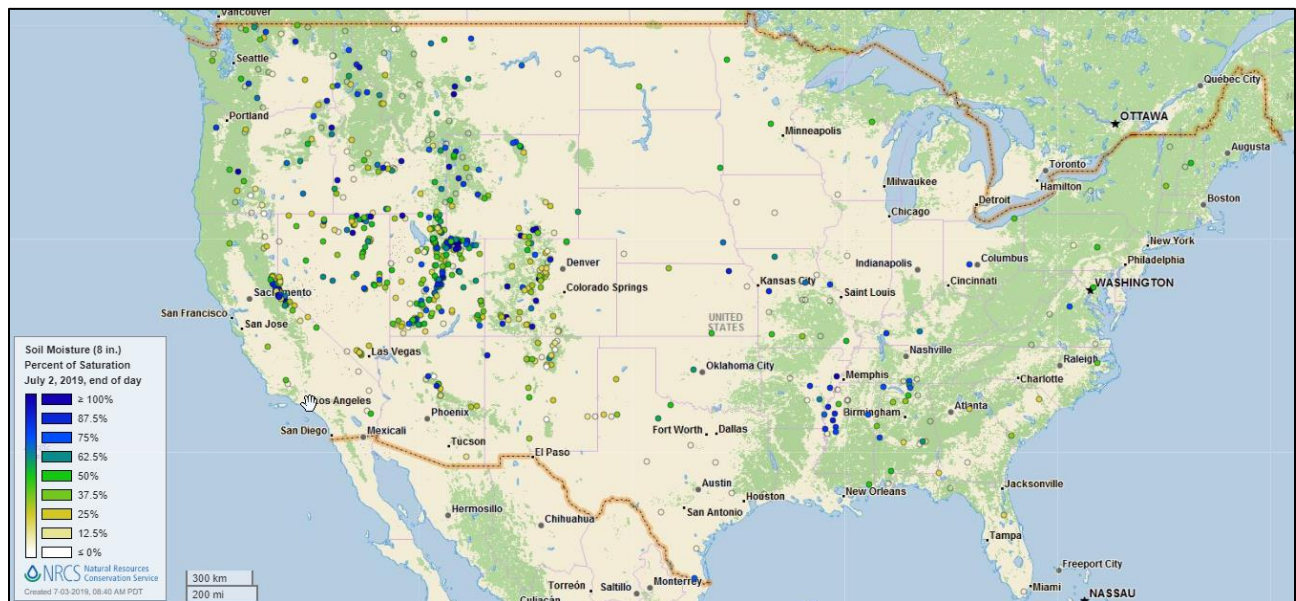
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of June 28, 2019

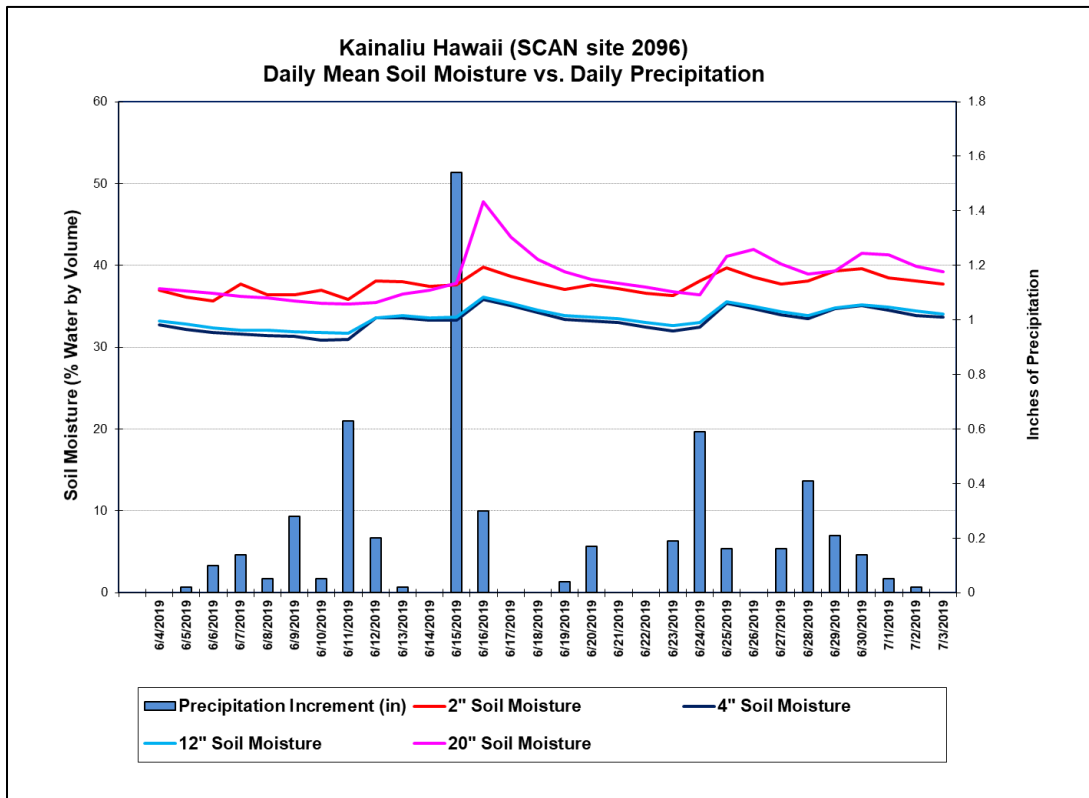
Soil Moisture Percent of Saturation

Source: NRCS SNOTEL and [Soil Climate Analysis Network](#) (SCAN)



Soil Moisture Data

Source: NRCS [Soil Climate Analysis Network](#) (SCAN)



This graph shows the soil moisture and precipitation for the last 30 days at the [Kainaliu SCAN site 2096](#) in Hawaii. 1.54 inches of rain fell on June 16, with a subsequent increase at all sensor depths. Small increments of precipitation fell almost daily during the past week totaling 0.99 inches and soil moisture at all sensor depths increased slightly.

Soil Moisture Data Portals

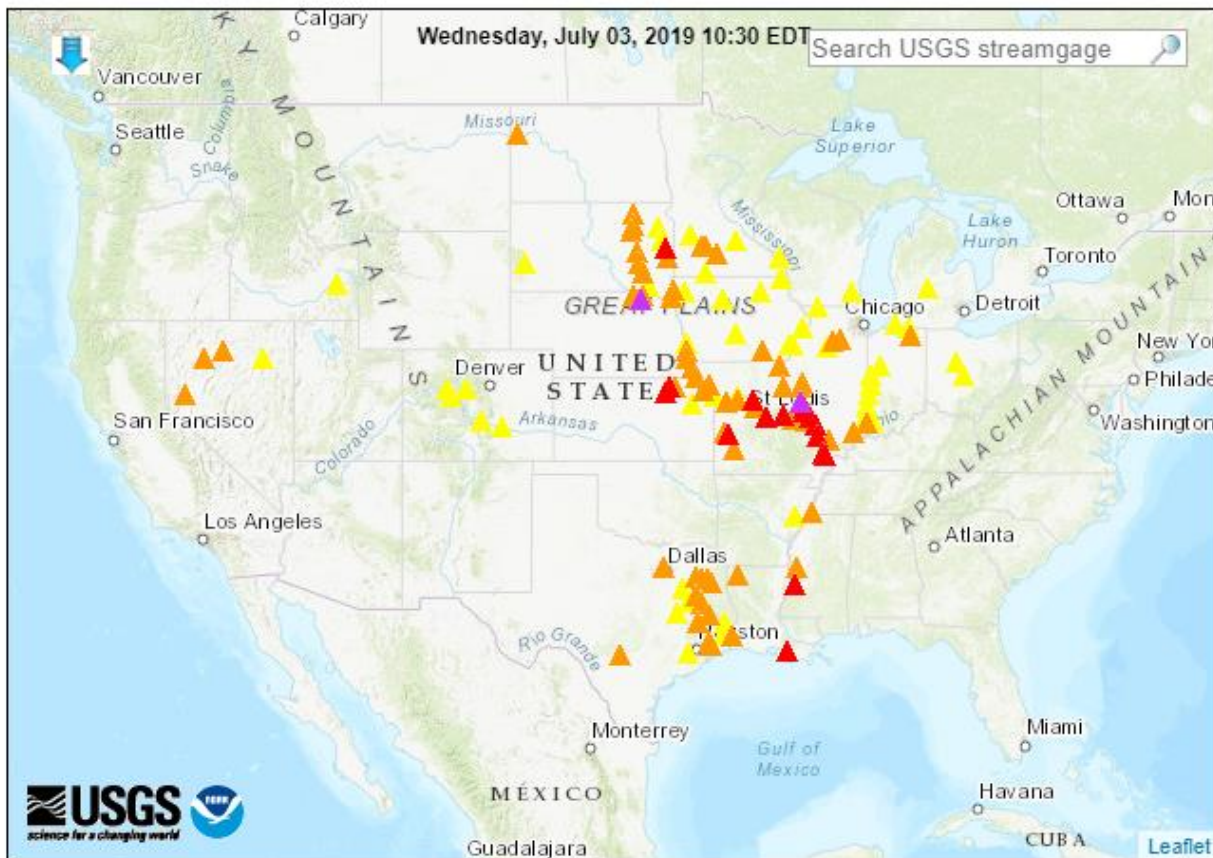
- [CRN Soil Moisture](#)
- [Texas A&M University North American Soil Moisture Database](#)
- [University of Washington Experimental Modeled Soil Moisture](#)

Streamflow, Drought, Flood, and Runoff

Source: U.S. Geological Survey

Map of flood and high flow conditions

(2 in major flood, 16 in moderate flood, 60 in minor flood, 50 in near flood)



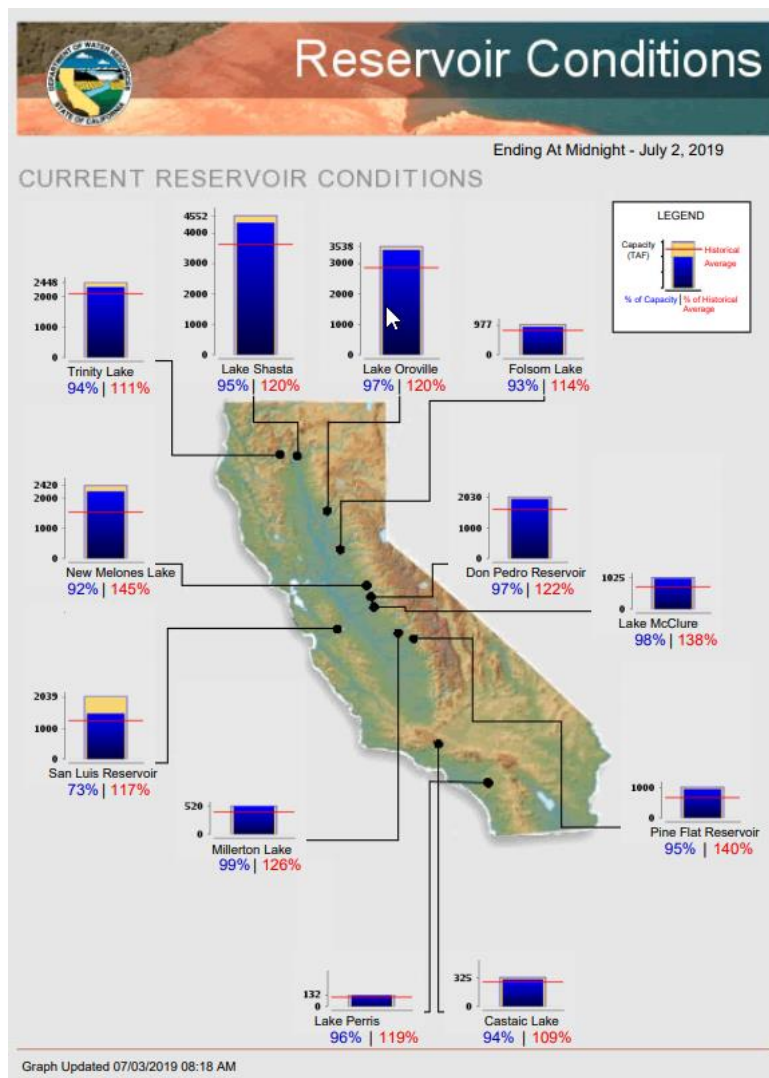
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
△ Streamgage with flood stage ○ Streamgage without flood stage						

[WaterWatch: Streamflow, drought, flood, and runoff conditions](#)

Reservoir Storage

Current California Reservoir Conditions

Source: California Department of Water Resources



[Current California Reservoir Conditions](#)

Hydromet Tea Cup Reservoir Depictions

Source: U.S. Bureau of Reclamation

- [Upper Colorado](#)
- [Pacific Northwest/Snake/Columbia](#)
- [Sevier River Water, Utah](#)
- [Upper Missouri, Kansas, Oklahoma, Texas](#)

Short- and Long-Range Outlooks

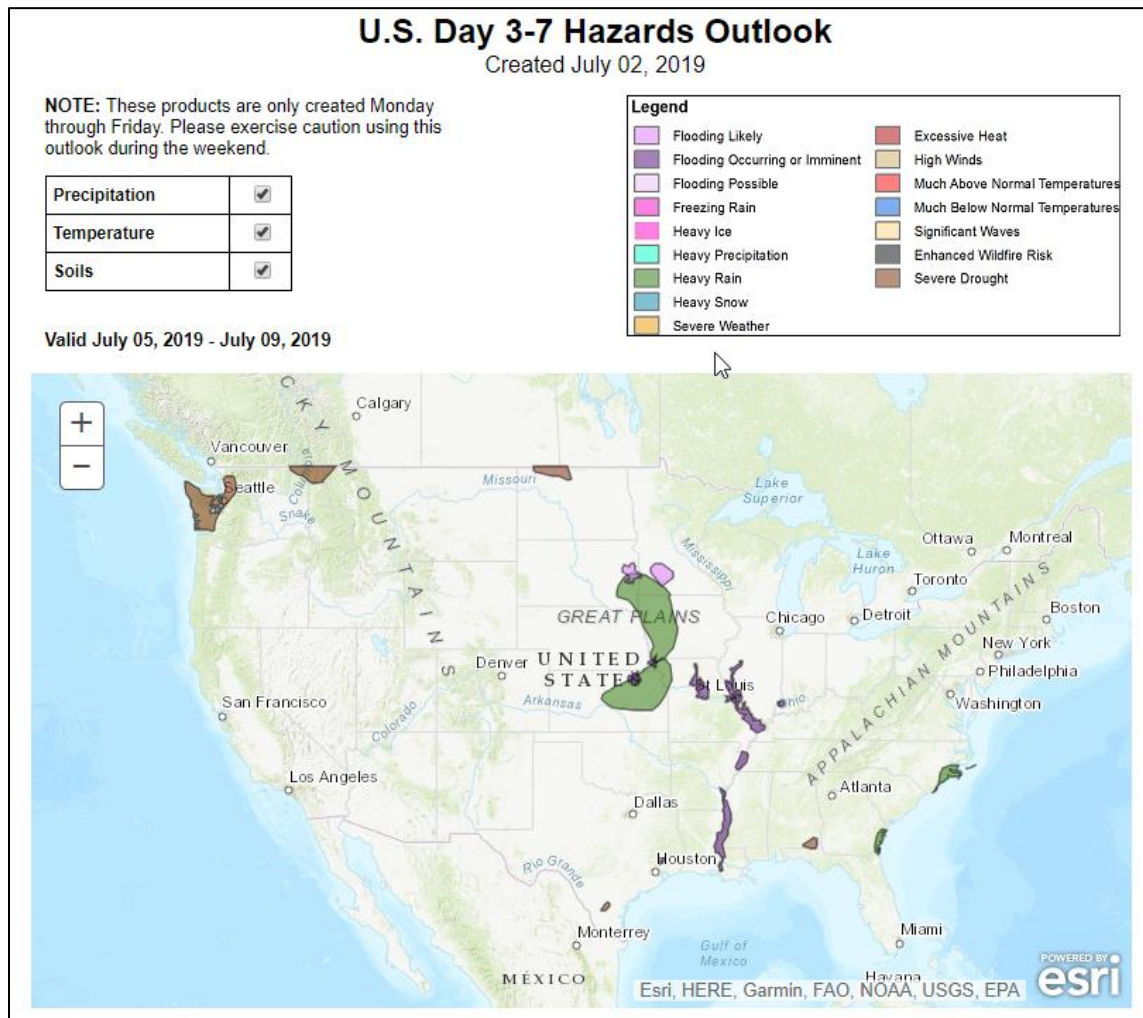
Agricultural Weather Highlights

Author: Eric Luebehusen, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, Wednesday, July 3, 2019: “During the next several days, cool weather will cover the Pacific Coast States, as well as northern portions of the Rockies and Plains. In contrast, very warm, humid weather will prevail across much of the South and East. Meanwhile, frequent showers and thunderstorms will pepper areas from the northern Plains into the Mid-Atlantic States, with 1- to 3-inch totals possible in many locations during the next 5 days. Locally heavy showers will also affect the southern Atlantic region, while mostly dry weather will dominate areas west of the Rockies. The NWS 6- to 10-day outlook for July 8 – 12 calls for hotter-than-normal weather across the South and Far West, while near- or below-normal temperatures will prevail from northern and central portions of the Rockies and Plains into the Northeast. Meanwhile, near- or above-normal rainfall across most of the country should contrast with drier-than-normal conditions in Arizona, Utah, and the western Gulf Coast region.”

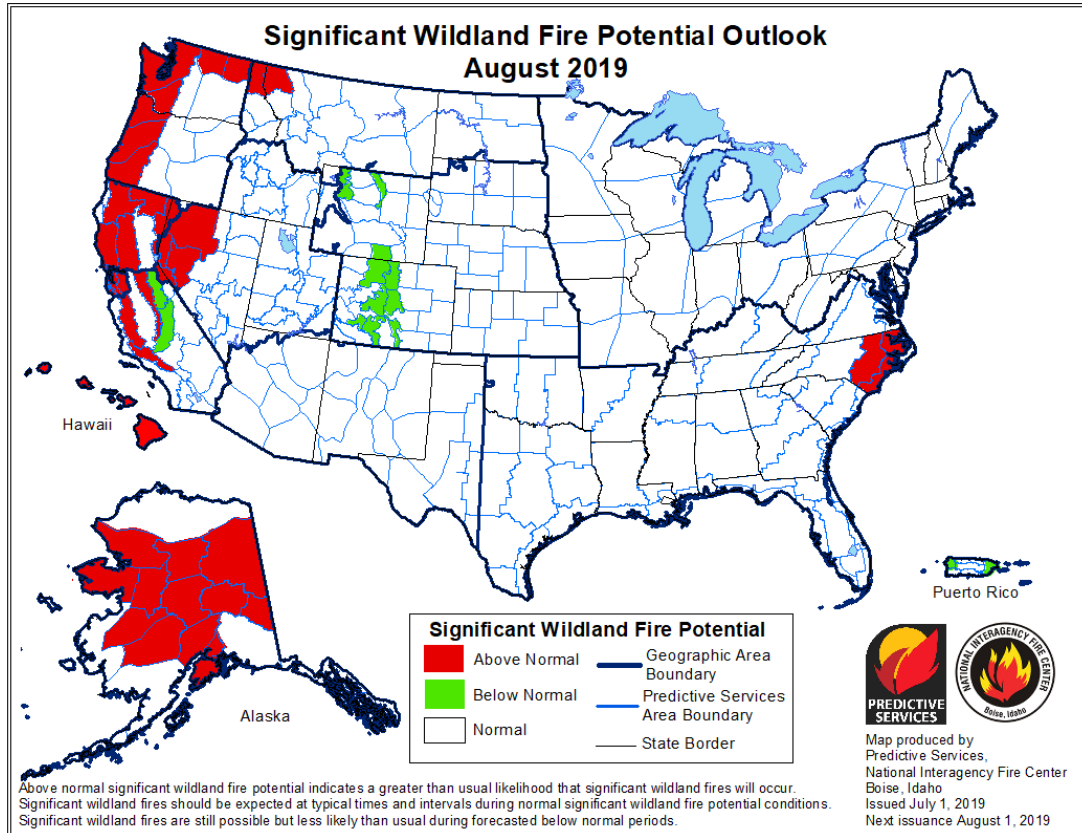
Weather Hazards Outlook: [July 5 – July 9, 2019](#)

Source: NOAA Climate Prediction Center



Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center



Seasonal Drought Outlook: [June 20 – September 30, 2019](#)

Source: National Weather Service

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

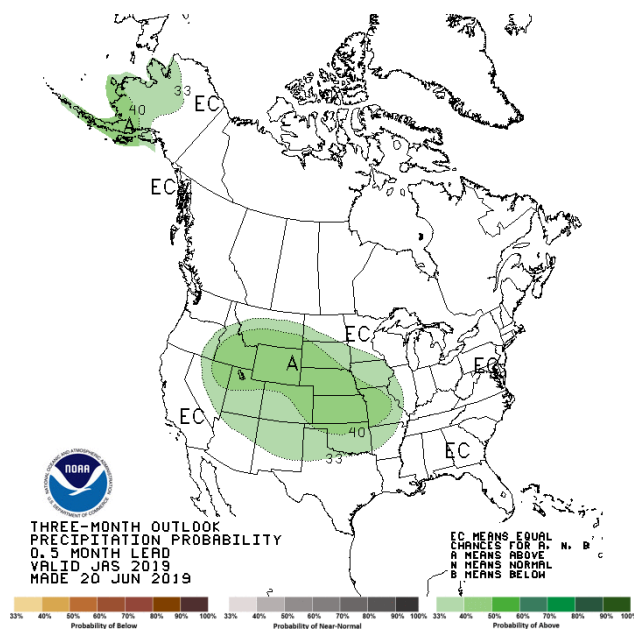
Valid for June 20 - September 30, 2019
Released June 20



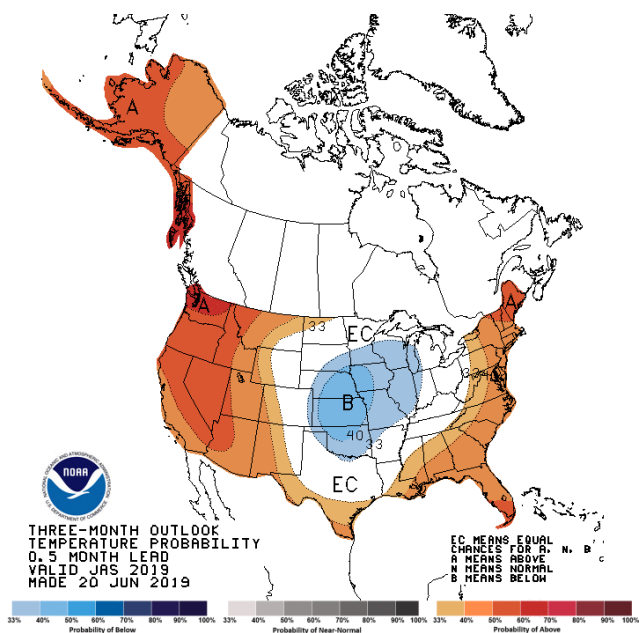
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



July-August-September (JAS) 2019 precipitation and temperature outlook summaries

More Information

The NRCS [National Water and Climate Center](#) publishes this weekly report. We welcome your feedback. If you have questions or comments, please [contact us](#).